

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545203

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-93-88-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P545203
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-12-1-LD4-2STD-40-UNV-93-88-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

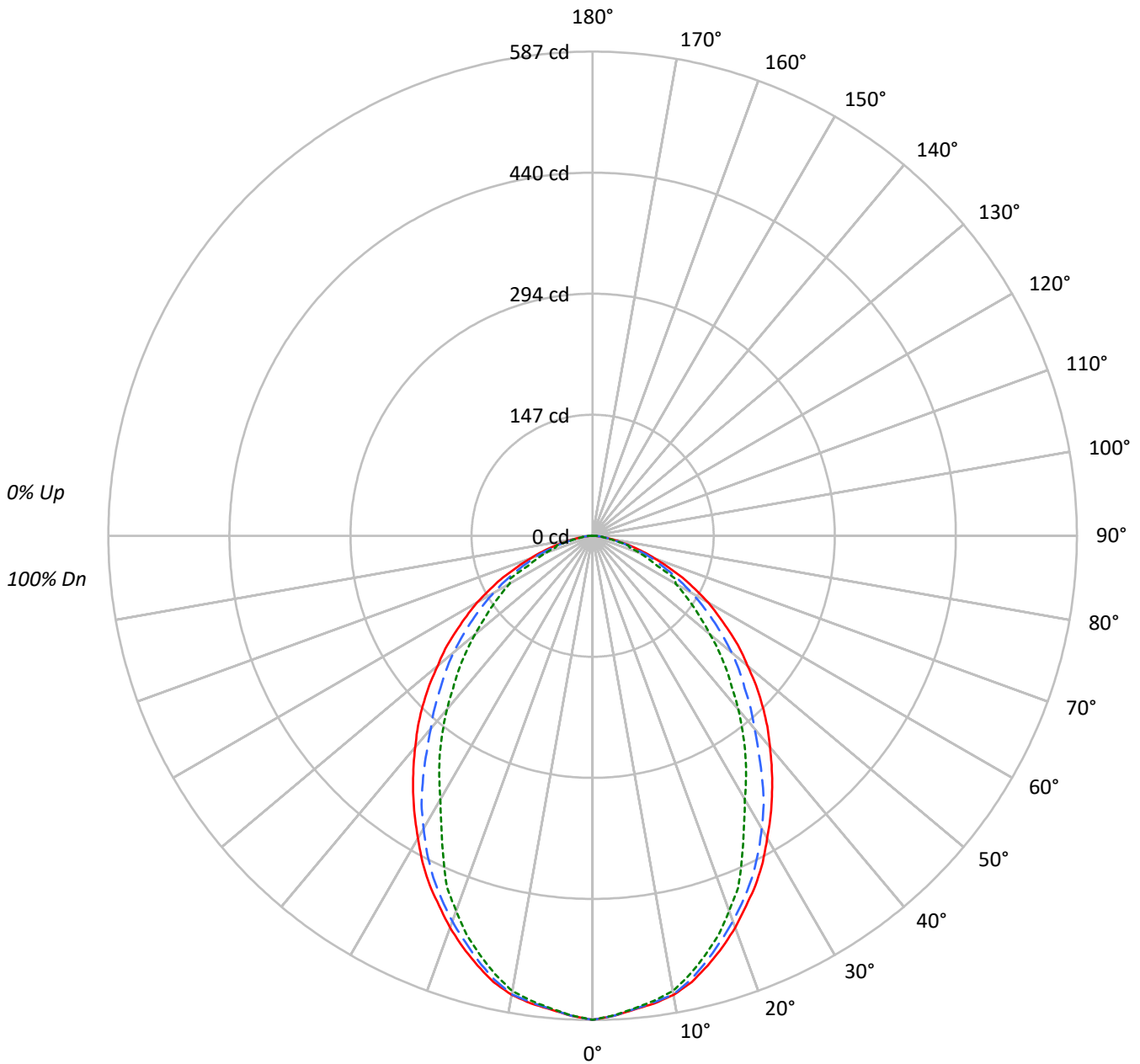
Lumens per Lamp: N/A
Luminaire Lumens: 1152.0 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				50				30				10				0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6316	6316	6316
5°	6230	6224	6216
10°	6177	6169	6125
15°	6010	5950	5866
20°	5789	5696	5541
25°	5551	5430	5092
30°	5261	5093	4586
35°	4983	4707	4243
40°	4699	4290	3861
45°	4430	3965	3491
50°	4101	3681	3113
55°	3795	3335	2789
60°	3477	2979	2497
65°	3059	2608	2211
70°	2521	2285	1879
75°	2005	1751	1834
80°	1345	1265	1178
85°	840	1000	1173



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	4.7
10°-20°	149.9	13.0
20°-30°	207.5	18.0
30°-40°	221.3	19.2
40°-50°	201.9	17.5
50°-60°	158.2	13.7
60°-70°	103.1	8.9
70°-80°	45.7	4.0
80°-90°	9.8	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	412.1	35.8
0°-40°	633.4	55.0
0°-60°	993.4	86.2
0°-90°	1152.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1152.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	587	587	587	587	587	
5°	577	576	576	575	575	55
15°	539	539	534	528	526	152
25°	467	465	457	441	429	215
35°	379	376	358	331	323	237
45°	291	285	260	239	229	224
55°	202	196	178	157	149	181
65°	120	113	102	104	87	118
75°	48	45	42	40	44	52
85°	7	8	8	9	10	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	586.8	586.8	586.8	586.8	586.8
2.5°	582.7	582.7	582.7	582.1	582.1
5°	576.6	576.0	576.0	575.3	575.3
7.5°	571.9	571.2	570.5	569.9	568.5
10°	565.1	565.1	564.4	561.0	560.4
12.5°	554.3	553.6	550.9	546.1	544.8
15°	539.3	539.3	533.9	528.5	526.4
17.5°	523.0	522.4	515.6	510.2	507.4
20°	505.4	504.0	497.3	488.4	483.7
22.5°	485.7	485.7	477.6	466.1	461.3
25°	467.4	464.7	457.2	441.0	428.7
27.5°	446.4	442.3	434.2	411.1	396.9
30°	423.3	421.3	409.8	379.9	369.0
32.5°	401.6	398.2	386.0	354.8	346.0
35°	379.2	376.5	358.2	331.1	322.9
37.5°	356.8	353.4	330.4	308.7	298.5
40°	334.4	330.4	305.3	285.6	274.8
42.5°	313.4	308.0	283.6	262.5	250.3
45°	291.0	284.9	260.5	238.8	229.3
47.5°	268.6	263.2	240.8	218.4	207.6
50°	244.9	240.2	219.8	197.4	185.9
52.5°	225.2	217.8	198.1	175.7	166.2
55°	202.2	196.1	177.7	156.7	148.6
57.5°	181.1	175.0	158.1	138.4	131.6
60°	161.5	152.6	138.4	121.4	116.0
62.5°	139.7	133.0	120.8	106.5	113.3
65°	120.1	113.3	102.4	104.5	86.8
67.5°	98.4	95.0	85.5	76.0	73.3
70°	80.1	76.0	72.6	62.4	59.7
72.5°	63.8	59.7	55.0	49.5	47.5
75°	48.2	44.8	42.1	40.0	44.1
77.5°	33.2	31.9	29.8	27.8	27.1
80°	21.7	21.0	20.4	19.7	19.0
82.5°	12.9	12.9	12.9	12.9	12.9
85°	6.8	7.5	8.1	8.8	9.5
87.5°	4.1	4.1	4.7	5.4	6.1
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)